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DILWORTH & BARRESE, LLP

Dilworth & Barrese, LLP

1000 WOODBURY ROAD

SUITE 405

WOODBURY, NY 11797

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte GERHARD SCHMAUS and RAVIKUMAR PILLAI

Appeal 2016-000057
Application 12/598,703¹
Technology Center 1600

Before ULRIKE W. JENKS, ELIZABETH A. LAVIER, and
TIMOTHY G. MAJORS, *Administrative Patent Judges*.

LAVIER, *Administrative Patent Judge*.

DECISION ON APPEAL

Pursuant to 35 U.S.C. § 134(a), Appellants seek review of the Examiner's rejections of claims 1, 3–8, 10–12, and 14–16. We have jurisdiction under 35 U.S.C. § 6(b). For the reasons set forth below, we AFFIRM.

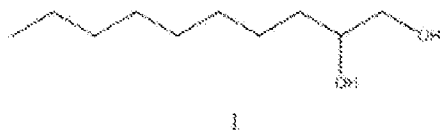
BACKGROUND

The Specification relates to antimicrobial preparations comprising 1,2-decanediol and other compounds. *See* Spec. 1:13–22. Claim 1 is illustrative:

¹ Appellants state the real party in interest is SYMRISE AG. Appeal Br. 3.

1. A composition comprising:

a) an antimicrobial active amount of 1,2-decanediol of formula 1:



b) an antimicrobial active amount of one or more compounds selected from the group consisting of propan-1-ol, propan-2-ol, chlorhexidine digluconate, chloroxylenol, *triclosan*, tridocarban, benzethonium chloride, methylbenzethonium chloride and benzalkonium chloride, and

c) an antimicrobial active amount of one or more compounds selected from the group consisting of mecetroniumetil sulfate, undecyleneamidopropyltrimonium methosulfate, (ethylenedioxy)dimethanol, benzyl-C12-18-lkyldimethylarnmoniumchloride, didecyldimethylammonium chloride, N,N-didecyl-N-methyl-poly(oxethyl)ammonium propionate, N-(3-aminopropyl)-N-dodecylpropan-1,3-diamin, N-dodecylpropan-1,3-diamin, N-(3-aminopropyl)-N-dodecylpropan-1,3-diamin, clorofen, 2-biphenyl-2-ol, chlorocresol, hydrogen peroxide, *acetic acid*, peracetic acid, glutaral and formaldehyde,

wherein the weight : weight ratio of a) and b) is as follows:

1,2-decanediol : propan-1-ol is in the range of from 1:75 to 1:500,

1,2-decanediol : propan-2-ol is in the range of from 1:75 to 1:500,

1,2-decanediol : chlorhexidine digluconate is in the range of from 20:1 to 1:15,

1,2-decanediol : chloroxylenol is in the range of from 5:1 to 1 :20,

1,2-decanediol : triclosan is in the range of from 10:1 to 1:5,

1,2-decanediol : triclocarban is in the range of from 10:1 to 1:10,

1,2-decanediol : benzethonium chloride is in the range of from 20:1 to 1:2,

1,2-decanediol : methylbenzethonium chloride is in the range of from 50:1 to 1:5,

1,2-decanediol : benzalkonium chloride is in the range of from 10:1 to 1:50, and

wherein the composition is a cosmetic, pharmaceutical and/or household product preparation.

Appeal Br. 11 (Claims Appendix) (emphases added).

REJECTIONS MAINTAINED ON APPEAL

1. Claims 1, 3, 4, 6–8, 10–12, and 14–16 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Schmaus² and Koenig.³ Ans. 4.⁴
2. Claim 5 stands rejected under 35 U.S.C. § 103(a) as unpatentable over Schmaus, Koenig, and Dale.⁵ Ans. 8.

DISCUSSION

With respect to illustrative claim 1, the Examiner finds that Schmaus teaches antimicrobial compositions of 1,2-decanediol for inhibiting growth of germs that cause body odor. Final Act. 3–4 (citing Schmaus Abstract, ¶¶ 17–18). Only “extremely small amounts” of 1, 2-decanediol are needed to achieve the antimicrobial effect, from 0.00002-20% by weight, but

² Schmaus et al., US 2003/0195263 A1, published Oct. 16, 2003.

³ Koenig et al., US 6,610,314 B2, issued Aug. 26, 2003.

⁴ We cite to the Examiner’s Answer dated July 22, 2015, which was filed subsequent to Appellants’ corrections to the Appeal Brief.

⁵ Dale et al., US 2005/0107344 A1, published May 19, 2005.

preferably 0.02-5%. *Id.* at 4 (citing Schmaus ¶ 35). Schmaus further discloses combining its composition with additional antimicrobial agents for greater efficacy. *Id.* (citing Schmaus ¶¶ 32–33). The Examiner finds that Koenig teaches antimicrobial compositions combining a proton-donating agent, such as acetic acid,⁶ combined with an alkyl phosphate anionic surfactant. *Id.* at 5 (citing Koenig 4:49–5:25). The Examiner acknowledges that Koenig states that its preferred compositions do not require additional “antimicrobial actives” known in the art, such as triclosan,⁷ but finds that Koenig teaches alternative embodiments that do incorporate additional antimicrobial actives, particularly in amounts from about 0.1-0.25% by weight. *Id.* at 5–6 (citing Koenig 4:34–37, 6:24–53, 9:22–34).

The Examiner finds that it would have been obvious for the ordinarily skilled artisan to have combined Schmaus and Koenig to produce a composition as recited in claim 1. Final Action 6. The motivation to do so would have come from the “commonality of utility” between the compositions disclosed in the references, i.e., compositions “suitable for disinfecting both hands and hard surfaces are disclosed as being particularly effective in providing antimicrobial effect against common bacteria including *staphylococcus* [sic] *epidermis*.” *Id.* at 6.

Appellants argue that the combination of Schmaus and Koenig is improper, and that the combination does not yield the claimed invention. *See* Appeal Br. 7. Specifically, Appellants maintain that “[t]he primary focus and goal of Koenig is to provide an antimicrobial formulation which is

⁶ Acetic acid is among the compounds listed in part (c) of claim 1.

⁷ Triclosan is among the compounds listed in part (b) of claim 1.

‘essentially free of an antimicrobial active,’” and ask why, then, one would be motivated to combine triclosan, “contemplated by Koenig as only used in trace amounts,” with the 1,2-decanediol of Schmaus. *Id.* at 8 (quoting Koenig 6:34–39). In Appellants’ view, combining Schmaus and Koenig in the manner claimed would “destroy[] the respective purposes of each of the references.” *Id.*

These arguments fail because they focus on Koenig’s preferred embodiments, rather than the full disclosure. As noted above, the Examiner recognizes that Koenig’s preferred compositions do not require additional antimicrobial actives (e.g., triclosan). But Koenig also expressly teaches that “antimicrobial soaps and lotions of the present invention may also optionally contain a variety of other components which may assist in providing the desired cleaning and antimicrobial properties.” Koenig 9:23–25. These can include “antimicrobial actives,” though Koenig advises such soaps and lotions typically “will contain a high percentage of water to reduce the possibility of skin irritation.” *Id.* at 9:29–34. Accordingly, we are unpersuaded that combining Schmaus and Koenig would destroy the purpose of the references. Instead, consistent with the Examiner’s reasoning, the combination advances the common goal of “provid[ing] a desired antimicrobial effect while avoiding undesirable skin irritation.” Ans. 11.

Appellants also argue that the Specification provides evidence of “synergistic antimicrobial activity” of the claimed compositions, whereas Schmaus does not indicate any such synergy. Appeal Br. 7. We, however, agree with the Examiner (*see* Ans. 9–10) that page 34 of the Specification, to which Appellants direct us (*see* Appeal Br. 7; Reply Br. 3), provides

insufficient objective data supporting synergy. Rather, page 34 of the Specification reports that certain mixtures (listed in Table 2) “had a synergistic antimicrobial activity,” and that the “synergistic activity was confirmed via calculation of synergy indices with Kulls’ equation” Spec. 34:17–19. Table 2 lists the “[s]ynergistically active ratios” of antimicrobial agents (*see id.* at 35), but Appellants have not directed us to any data supporting the assertion of synergy itself (such as, for example, the results of the calculations). Further, as the Examiner also notes (*see* Ans. 10), Appellants have not demonstrated why any such synergy (if substantiated) would amount to evidence of unexpected results, rather than expected benefits (e.g., additive antimicrobial effect).

Having considered Appellants’ arguments, we are unpersuaded that the Examiner erred in rejecting claim 1. Claims 3, 4, 6–8, 10–12, and 14–16, which are not argued separately, fall with claim 1. *See* 37 C.F.R. § 41.37(c)(1)(iv) (2011). Appellants argue claim 5 exclusively by referring back to their arguments for claim 1. *See* Appeal Br. 9. As we affirm the Examiner’s rejection of claim 1, we likewise affirm the Examiner’s rejection of claim 5.

CONCLUSION

The rejections of claims 1, 3–8, 10–12, and 14–16 are affirmed. No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED